DOCUMENT RESUME

ED 277 983 CS 008 626

AUTHOR Greif, Ivo P.
TITLE A Study of the Utility of the Vowel in Open Syllable and Vowel in Closed Syllable Rules when Pronouncing Three-Syllable Words.
PUB DATE [84]
NOTE 18p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Language Research; *Phonics; Primary Education; *Pronunciation Instruction; *Stress (Phonology); Structural Analysis (Linguistics); *Syllables; *Vowels

ABSTRACT

To determine the usefulness in correctly pronouncing the vowels of three-syllable words of two commonly taught phonics rules and to assess whether their utility is inversely proportional to the number of syllables in a word, a study analyzed all of the over 100,000 three-syllable words in the "Scott Foresman Advanced Dictionary." As a reference, the paper quotes two frequently taught rules of phonics: (1) "when a vowel is in the middle of a one syllable word, the vowel is short"; and (2) "if the only vowel in a word is at the end of that word, it is usually long." For the purpose of the present study, these rules are restated, in order to make them applicable to syllables as well as to words: (1) "when the only vowel is not the last letter in the syllable, it represents the short sound"; and (2) "when the only vowel is the last letter in a syllable, it represents the long sound." Analysis revealed six main categories (each defined in the study) into which the three-syllable words fit. Findings indicated that the overall utility of the rules for all the open and closed syllables was 9.99% (of the 19,427 words researched). However, analysis of the correct pronunciation of the entire words containing these syllables revealed an overall utility of only 3% for the rules. These evaluations presumed that no errors were made either in syllabication or consonant pronunciation. Given that children in early first grade usually make many mistakes of this sort, it is probable that the utility of the phonics rules in question is even lower. Results supported the hypothesis that the utility of the rules is inversely proportional to the number of syllables in a word. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED277983

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A STUDY OF THE UTILITY OF THE VOWEL IN OPEN SYLLABLE AND VOWEL IN CLOSED SYLLABLE RULES WHEN PRONOUNCING THREE-SYLLABLE WORDS

by

Ivo P. Greif, Ed.D.

Professor of Education--Reading

Illinois State University

Normal, Illinois 61761

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ivo P. Greif

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

CS008626

Many reading programs as implemented in the classroom are heavy on phonic analysis and most phonic analysis programs focus heavily on vowel letter-sound relationships. Nearly universally these two rules are taught: 1) "When a vowel is in the middle of a one syllable word the vowel is short (bed)," and 2) "If the only vowel letter is at the end of a word, the letter usually stands for the long sound (go)."[1] These are frequently called the "vowel in a closed syllable," and "vowel in an open syllable" rules. Note that in the form given, they apply to words. However, these rules are applied to syllables as well. Greif, in previous research, gave reasons for modifying the rules to read "When the only vowel is not the last letter in a syllable, it represents the short sound," and "when the only vowel is the last letter in a syllable, it represents the long sound." Greif also reported the usefulness of these rules when determining the sound

[1] This is the wording used by Theodore Clymer in his phonics utility research, and by four others who replicated his research.

of vowels in all one syllable words in a dictionary, and again in all two syllable words in a dictionary (Greif, 1984). From those two projects, it began to appear that the more syllables there were in a word, the less the utility of the rules. The purpose of this research project was to: 1) determine the usefulness of these two rules in correctly pronouncing the vowels of all three syllable words in a dictionary; and b) to determine whether the above apparent trend (that the larger the number of syllables, the less the utility of the rules) would continue.

The dictionary source used in this study was the Scott Foresman Advanced Dictionary by Thorndike and Barnhart (1983). All of the three syllable words in the entire entry list of over 100,000 were used. In addition, all inflected forms of words which were three syllables, and listed in bold face type, were also used. It should be noted that many three syllable words were not included because the dictionary did not list inflected forms of nouns, verbs, adjectives, and adverbs which were regularly formed. Nonetheless, there were 19,427 three syllable words.

In analyzing the nature of the words, it became clear that there were six categories as follows:

Category 1--Words in which all of the syllables are simple open or closed syllables with no complicating elements. (con/tent/ment)

Category 2--Words in which one of the syllables contains adjacent vowels which one would be inclined to pronounce using the "VV" rule. (re-tain-er)

Category 3--Words in which one or more syllables contain a vowel-consonant-final e pattern, which one would be inclined using the VCE rule. (in/tro/duce)

Category 4--Words in which one or more syllables contain the letter "y," which can be pronounced five different ways, with no clear indicator as to which. (re/ply/ing)

Category 5--Words in which two syllables contain any combination of VV, VCE, or letter y patterns. (main/tain/er, aer/o/space)

Category 6--Words in which all three syllables are some combination of VCE, VV and/or the letter y patterns. (aus/tere/ly)

The proper category was determined for each word, which was then placed on that list, in syllable form, as shown in the dictionary. In addition, notation was made as to whether the syllable was open or closed, and whether the sound of the vowel in the word as correctly pronounced (again as shown in the dictionary)

conformed to the statement in the applicable rule. If several pronunciations were shown, the sound was considered to conform if it did in any one of the pronunciations given, no matter in what order they were given.

To my knowledge, no previous research has been reported on the utility of the rules subject to study here when applied to three syllable words. However, as just mentioned, research was done on their application to one and two syllable words. Brief information on the results can be found near the end of this article.

Findings

The various findings obtained in this study are shown category by category in Tables I through VII, which follow.

Table I

The Distribution of the 19,427 Words Among the Six Categories

	Word Category	#of Words	% of Total
1.	Simple open/closed	9,680	49.8%
2.	Simple open/closed and one VV pattern	3,916	20%
3.	Simple open/closed and one VCE pattern	2,510	13%
4.	Simple open/closed and one letter Y	2,215	11.4%
5.	Simple open/closed and two VV, VCE and/or letter y patterns	1,130	5.8%
6.	Three VV, VCE and and/or letter y patterns	48	.2%

Table II

Utility of the Two Rules of This Study When Used on Three Syllable Words in Category #1

Syllables per Word in Which Vowels are Pronounced Correctly	# of Words	% of Total
none	1,540	16%
one	4,881	50.8%
two	2,729	28.4%
three	458	4.76%
Totals	9,608	100%

In 16% of the words, none of the syllables correctly could be pronounced using the appropriate rule of the two. In 50.8% only one syllable could be pronounced correctly, in 28.4% only two syllables could be pronounced correctly, in 28.4% only two syllables could be pronounced correctly, and in only 4.76% could all three syllables be pronounced correctly.

Since mispronouncing only one syllable results in an incorrectly pronounced word, it is of little significance that one or two syllables can correctly be pronounced, particularly one syllable. With two syllables correctly pronounced, one might recognize that the third was wrong, and then correct it, but that would occur only on words which were once known but temporarily forgotten.

Effectively, then, only 4.76% of these 9,608 words correctly can be pronounced using whichever of the two rules of this study is appropriate for the syllable.

Table III

Utility of the Two Rules of This Study When Used On Three Syllable Words in Category #2

Syllables per Word in Which Vowels are Pronounced Correctly	# of Words	% of Total
none	1,503	38.5%
one	1,981	50.7%
two	424	10.8%
three	0	0
Totals	3,908	100%

Since one of the syllables in all these words contains one VV pattern, one syllable is always subject to the percent of utility of the VV rule (when there are two vowels side by side in a word, the first vowel has the long sound, and the second one is silent) which is 14.7%, according to Greif (1981 and 1984). Therefore, even the 10.8% in which two syllables correctly can be pronounced is subject to 14.7% which reduces the possibility of pronouncing the entire word correctly to 1.6%. For the 50.7% in which only one syllable correctly can be pronounced, if the other one is pronounced incorrectly the word is pronounced incorrectly. In 38.5 of the words neither of the two non VV pattern syllables correctly can be pronounced.

Effectively then, only 1.6% of these 3,908 words correctly can be pronounced using two rules of this study, and the VV rule as it also applies.

Table IV

Utility of the Two Rules of This Study When Used On Three Syllable Words in Catergory #3.

Syllables Per Word in Which Vowels are Pronounced Correctly	# of Words	% of Total
none	586	23.3%
one	1,711	68.2%
two	213	8.5%
three	0	0
Totals	2,510	100%

In this case, one syllable in every word contains a VCE pattern and is subject to the utility of the VCE rule (when there are two vowels in a word, one of which is a final e, the final e is silent and the other vowel has the long sound) which, over the long range, is 53%, according to Greif (1980). Accordingly, even the 8.5% of the words in which two syllables are pronounced correctly is subject to the 53% utility for the third syllable (8.5% x 53%), which reduces

the possibility to 4.5% for pronouncing the entire word correctly. As before, if one or more syllable is mispronounced, the word is mispronounced, so pronouncing one syllable in the other 68.2% is of little significance. The remaining 23.3% would be mispronounced in both of the open and/or closed syllables. In the final analysis, 4.5% of these 2,510 words correctly can be pronounced using the rules of this study, and the VCE rule as it also applies.

Table V

Utility of the Two Rules In This Study When Used On Three Syllable Words in Category #4.

Syllables per Word in Which Vowels are Pronounced Correctly	# of Words	% of Total
none	531	24%
one	1,242	56%
two	442	20%
three	0	0%
Totals	2,215	100%

One syllable in every word in this category contains the letter "y" and is, therefore, subject to the % of utility for pronouncing that letter. Since it can be pronounced five ways (long and short e, long and short i, and schwa) and there is no way to figure out which, the utility would be 20% over the long range.

Obviously, 24% of the words are pronounced incorrectly in both of the common open and/or closed syllables. In another 56%, one of those syllables is pronounced incorrectly, so the word is also pronounced incorrectly. Finally, the 20% in which both open and/or closed syllables are pronounced correctly is reduced by the 20% utility of the letter "y" (20% x 20%) reducing the final effective utility to 4% of the 2,215 words in this category, when using the rules of the study and the chances of pronouncing the letter "y" correctly, which also applies.

Table VI

Utility of the Two Rules in This Study When Used On Three Syllable Words in Category #5.

Syllables Per Word in Which Vowels are Pronounced Correctly	# of Words	% of Total
none	733	65%
one	397	35%
two	0	0
three	0	0
Totals	1,130	100%

In this case, two syllables in every word contained some combination of the VV, VCE, and/or y pattern, and are subject to utilities of 14.7%, 53%, and/or 20%. In 65% of the words, the common open or closed syllable cannot be pronounced correctly using the rules of the study. In 35% of the words the open or closed syllable can be pronounced correctly, but pronunciation of the entire word is subject to six different combinations of the above three utilities for the other two syllables. That produces utilities of 8%, 3%, 10.6%, 2.2%, 28%, and 4% of some portion of the entire group of 397 words. The final effective average utility is 9.3% for the 1,130 words in this category.

Since the words in Category #6 contain either the VV, VCE, or Y pattern in some combination in all three syllables, the rules of this study do not apply. There were only 48 such words. But, if you are interested, the possibilities of pronouncing these 48 words range from 14.9%, 5.6%, 4.1%, 2%, 1.5% on through to .3%, for an average 3.2% possibility of correct pronunciation.

Now let us consider the possibility of correctly pronouncing the vowels in all the simple open and closed syllables in a given word, and only in those syllables. In doing so, let us disregard the fact that one syllable in each word in Categories 2, 3, and 4, and two syllables in each word in Category 5 contain VCE, VV or Y and may not be pronounced correctly. The total number of words in each category in which the simple open and/or closed syllables, only, can be pronounced is shown in Table VII.

Table VII

Number of Words in Which the Vowels In All the Simple Open Or Closed Syllables Only, Correcly Can Be Pronounced (Disregarding the VV, VCE, or Y Pattern Syllables)

Category	# of Words
1	458
2	432
3	213
4	442
5	397
	1,942

The total number of words in which the vowels in all the open and closed syllables correctly can be pronounced is 1,942, and that is 9.99% of the 19,427 words. This is the most liberal interpretation favoring the rule it is possible to make. The 9.99% of utility thus obtained, however, is hopelessly low.

If we consider correct pronunciation of the entire word, however, then 600 of these 19,427 words, or 3% correctly can be pronounced, assuming no errors in syllablizing them nor in pronouncing the consonants.

It is important to understand that these percentages were obtained on words with 100% accurate syllabification. In actual practice, one needs first to syllabize the words, and then apply the rules, but determining correct syllabification according to rules usually taught has considerably less than 50/50 chance of being correct (Greif, 1984).

It also appears that the apparent trend, "the more syllables in a word, the lower the utility of the rules," is a fact. For one syllable words, the utility of the closed syllable rule is 39.1% (68% when modified as in this study) and for the open syllable rule, 43.8% utility (modifying it made no difference in this case). These percentages are from two studies which used all the words in a 138,000 entry dictionary.

For two syllable words, the utility was 18.59% based on correct pronunciation of the entire word, and using 8,858 words containing only simple open and closed syllables. In this study of three syllable words, the utility was 4.8% on the same basis using 9,608 words containing only simple open and/or closed syllables.

It is clear that the utility of the rules is remarkably lower each time words with one extra syllable are used. It was my observation that the utility decreased as the number of unaccented syllables increased. Since four and more syllable words have two or more unaccented syllables and more pronunciation shifts and changes due to structural additions, it is safe to infer that the utility of these rules for four and more syllable words is practically nil. Someone else can count those, please!

If the pronunciation of words is essential to your reading program, the use of the rules in this study (after correct syllabification!) is certainly not the way to achieve it for three syllable words. Either the dictionary will have to be used, or the pronunciation will need to be committed to memory and recalled when needed. We've all done just that. Why is it we don't practice what we teach? Or, teach what we practice?

BIBLIOGRAPHY

Clymer, Theodore. "The Utility of Phonic Generalizations in the Primary Grades," The Reading Teacher, Vol. 16, January 1963, pp. 252-258.

Greif, Ivo P. "'When Two Vowels Go Walking,' They Should Get Lost," The Reading Teacher, January 1981, pp. 460-461.

Greif, Ivo P. "A Study of the Pronunciation of Words Ending in a Vowel-Consonant-Final E Pattern," The Reading Teacher, December 1980, pp. 290-292.

Greif, Ivo P. "A Study of the Pronunciation of Words Containing Adjacent Vowels."

Greif, Ivo P. "A Study of the Pronunciation of Single-Syllable, Closed-Syllable Words," 1984.

Greif, Ivo P. "A Study of the Pronunciation of Single-Syllable Words Having the Only Vowel as the Final Letter," 1984.

Greif, Ivo P. "A Study of the Usefulness of Two Syllabification Rules," 1984.

Greif, Ivo P. "The Utility of the 'Vowels in Open Syllable' and 'Vowels in Closed Syllable' Phonic Rules When Pronouncing Two-Syllable Words," 1984.